

Water Quality Protection Program Implementation Action Plan

Goal Statement

To reduce contaminanation from nonpoint source pollution in MBNMS and its watersheds.

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Introduction

The Sanctuary is adjacent to nearly 300 miles of California's Coastline and receives runoff from eleven major watershed areas. The 7000 square miles of land uses in the adjacent watersheds range from forest and grazing lands to heavily agricultural and urbanized areas. As rainfall or irrigation water passes over the different land uses within the watershed it can pick up a variety of pollutants, which find their way into streams, rivers, wetlands, harbors, and eventually into the Sanctuary. Offshore areas of the Sanctuary are in relatively good condition, but nearshore coastal areas, harbors, lagoons, estuaries and tributaries show a number of problems including elevated levels of nitrates, sediments, persistent pesticides, metals, bacteria, pathogens, detergents, and oils. These contaminants can have a variety of biological impacts including bioaccumulation, reduced recruitment of anadramous species, algal blooms, mortality due to toxicity, transfer of pathogens, and interference with recreational uses of the Sanctuary.

During the designation of the Sanctuary in 1992, eight key water quality agencies within the Sanctuary region entered into a Memorandum of Agreement (MOA) to provide an ecosystem-based water quality management process that integrates the mandates and expertise of existing coastal and ocean resource managers and protects the nationally significant resources, qualities and compatible uses of the Sanctuary. This MOA led to the development of the Sanctuary's Water Quality Protection Program (WQPP). Today, the WQPP is a partnership of 25 federal, state and local agencies, public and private groups, dedicated to protecting and enhancing water quality in the Sanctuary and its watersheds.

This partnership of MOA signatories, additional public agencies, non-governmental and private organizations are working as members of the Water Quality Protection Program Committee. This committee oversaw the development of four action plans entitled Implementing Solutions to Urban Runoff; Regional Monitoring, Data Access, and Interagency Coordination; Marinas and Boating; and Agriculture and Rural Lands. Many committee members have been partners in initial implementation efforts along with a wide variety of stakeholders in the community including federal, state, and local agencies, businesses, landowners, environmental groups, and the general public.

Program Updates

Rather than addressing new topics, this action plan incorporates recommendations of the existing WQPP plans that have been created since the Sanctuary was designated, and recommends ongoing or additional steps for implementation. Existing WQPP plans include:

- Implementing Solutions to Urban Runoff
- Regional Monitoring, Data Access, and Interagency Coordination
- Marinas and Boating
- Agriculture and Rural Lands.

These original action plans are organized in a format similar to the other Jmpr action plans by Strategy and Steps (here called Activities), with each Activity containing multiple components. Despite limitations on funding dedicated to implementation and staff vacancies during recent years, there has been substantial implementation of a number of strategies, as well as many strategies that have been partially implemented. In many of these cases of partial implementation, implementation has occurred in some geographic areas or at some times, but has not been widespread or regular throughout the region. A few of the strategies have already been completed or are fully implemented and ongoing, and a few strategies have not been initiated at all.

The program has been quite successful in leveraging the plans into funding from outside sources, often through grant proposals, and in the case of the Agriculture and Rural Lands plan, through a Congressional allocation from the USDA budget to one of our key partner agencies. Although this outside funding has been essential for program implementation, a disadvantage of this approach has been that it is quite time consuming to pursue, obtain and administer such outside funding. Grants are generally quite limited in scope and duration and so can lead to a rather fragmented approach.

A general overview of the number of strategies and activities and the level of implementation is provided in the table below.

Water Quality Protection Program: Action Plan Implementation

Monterey Bay National Marine Sanctuary – Proposed Action Plans
Water Quality – Water Quality Protection Program Implementation Action Plan

Action Plan	Number of Strategies in Full WQPP Plans	Total Number of Activities in Full WQPP Plans	Number of Strategies Implemented			
			Complete d or Ongoing	Substantia l Implemen- tation	Partial Implemen- tation	Not Initiated
I. Implementing Solutions to Urban Runoff	7	37	0	3	4	0
II. Regional Monitoring, Data Access and Interagency Coordination	3	25	0	2	1	0
III. Marinas and Boating	7	50	1	1	2	3
IV. Agriculture and Rural Lands	24	90	1	3	14	6
Total WQPP	41	202	2	9	23	7

The WQPP Committee used the JMPR process to review the WQPP and its individual action plans, to determine what has been implemented, what the barriers to full implementation have been, and what should be priorities as the program moves forward. Following below are each of the four existing action plans broken down into their component strategies. The implementation of the steps in the original plans is briefly summarized here in the table and text under each strategy. This implementation update is followed by descriptions of the Activities that will be ongoing or next steps for that Strategy, along with prioritizations identified as Phase 1, II or III. The strategies and activities described here are short summaries of the detailed recommendations in the four original WQPP action plans that total 250 pages.

ACTION PLAN I: IMPLEMENTING SOLUTIONS TO URBAN RUNOFF

Urban runoff is a significant problem in the Sanctuary's watersheds that can benefit from a coordinated regional approach towards education, training, and management. The constituents of concern associated with urban runoff include petroleum hydrocarbons, metals, sediments, detergents, nutrients, pesticides, and organics. The WQPP Urban Runoff Plan was developed in 1996 in collaboration with the WQPP committee, many of the region's public works representatives and other stakeholders. It describes seven priority strategies for addressing the problems associated with urban runoff in the region.

Strategy WQPP-1: Public Education and Outreach

The objective of this strategy in the original plan was to review existing educational programs and materials, and to build a framework that would develop a comprehensive regional education and outreach program focused on urban runoff, water quality, and watershed issues. This was to be accomplished by coordinating and building on education efforts that address the causes of urban runoff problems, its effects on habitats and resources, and promotion of measures that reduce pollutants in runoff.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Review Existing Programs and Materials to Identify Best Tools	Initial review completed, needs update
Establish a Framework for the Program	Substantial implementation, but intermittent
Develop Supporting Materials	Substantial implementation
Establish Methods for Distributing Information	Partial implementation

The MBNMS developed an initial framework that identified specific target audiences, prioritized geographic areas, and identified the tools, distribution methods, and existing outreach programs to incorporate into the program. Numerous high quality educational materials and programs have been developed or modified to implement this strategy. Many of these materials are available in bilingual formats.

- "Dirty Word" TM radio spots – focus on urban runoff targeting general public
- "Dirty Word" TM PSA's for television – focus on urban runoff targeting general public
- "Storm Drains to Sanctuaries" – PSA for television
- Bus ad / movie slide – addressing storm drains
- Roving watershed and storm drain models
- Storm drain poster
- Monterey Bay Begins on Your Street brochure
- Urban Watch program brochure
- "Be Kind to Animals" – Coloring book for children
- WQPP Brochure
- A Citizens Guide to Clean Water

Written materials have been distributed through a variety of venues, including businesses, schools, at public events, and teacher training workshops. Radio ad campaigns have provided multiple exposures in past years, but now lack funding for ongoing presentations. Outreach programs have included a door-to-door campaign in the City of Watsonville, incorporation of water quality lessons into teacher training workshops, and hands-on models, which are used to demonstrate polluted runoff at public events. Outreach has also included water quality presentations to local and state governments,

and to various conferences, workshops and classes. Although radio and TV reaches audiences throughout the region, much of the focus of the other types of outreach has been in a few key cities that have been initial partners in the effort, including Monterey, Pacific Grove, and Watsonville.

Strategy Description

Although much has been implemented under this strategy, there has not been a consistent program over time or across the cities in the region due to the variable grant-funded nature of activities and staff turnover. Stable implementation of the framework is needed for an educational program that continuously evaluates and expands outreach and addresses the many geographic areas and populations that have not been a focus of the program to date.

Activity 1.1: Update and Reprint Existing Educational Materials as Needed

Activity 1.2: Broaden Distribution of Existing Outreach Materials and Programs

Develop outreach distribution mechanisms and programs that are more consistent over time and throughout the region, repeating outreach as needed in existing pilot areas and expanding to coastal cities and constituents not yet reached and inland cities like Salinas.

Activity 1.3: Develop a Stable Funding Source and Infrastructure with Partners to Facilitate Ongoing Distribution and Programs

This should include coordinating and pooling resources with cities required to develop education programs under their NPDES Phase II permits.

Activity 1.4: Expand Outreach to the Hispanic Population in Coordination with MERITO

Status: Phase 1

Potential Partners: Cities and counties, MRWPCA, schools, business organizations

Strategy WQPP-2: Technical Training

The main objective of this strategy in the original plan was to develop voluntary technical training material and programs for public works and planning staff, small businesses/trades, and construction companies on methods to prevent urban runoff pollution.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Evaluate Existing Training Programs, Which Could Be Adopted or Modified	Completed, Needs Updating
Assemble Materials / Enlist Instructors	Completed, Needs Updating
Advertise / Conduct Training in Two Cities	Completed
Conduct Regional Training Program	Substantial Implementation
Evaluate Effectiveness of Training	Partial Implementation
Schedule Ongoing Series of Workshops	Partial Implementation
Establish a Technical Support Network	Not Initiated

Substantial implementation of the technical training strategy occurred in the initial years after plan completion, although activity has reduced in recent years. Implementation on a regional level included co-hosting of 5 training workshops for public works and planning staff focused on various technical elements of a Model Urban Runoff Program (see below). The Sanctuary also conducted technical training on-site with 7 public works departments of individual municipalities via a contractor who addressed specific best management practices related to urban runoff and coliform contamination.

Training for the business community has been partly implemented through development and partial distribution of a variety of technical training materials, including:

- Restaurant outreach survey to assess understanding of issue and current practices
- Restaurant outreach training video on best management practices called “Make The Connection”
- Restaurant Best Management Practices poster
- Automotive Best Management Practices poster

These materials for businesses have been primarily distributed through outreach programs in the cities of Monterey and Pacific Grove, utilizing funding from the cities.

Strategy Description

Similar to the education strategy, although substantial implementation has occurred, the trainings have not been consistent in time or covered sufficient geographic areas or target audiences. The training program should be an ongoing one due to staff turnover in target organizations, the need to remind and provide updates to ongoing staff, and to reach new audiences.

Activity 2.1: Update and Expand Training Materials

This should include reviewing past training materials for public works departments to summarize new management measures and regulations. Additional training modules should be included to address planning department staff, supervisors of construction and maintenance crews, businesses, and trades and agency personnel handling hazardous materials.

Activity 2.2: Continue Regional and On-site Urban Training Workshops

This should include contacting municipal and county department heads and trade associations to develop target audiences. The Sanctuary should also continue to perform on-site municipal training sessions and modules to reach those staff who are actually implementing the work and who generally are not reached by regional workshops.

Activity 2.3: Develop and Conduct Training Workshops with Developers

Local planning department staff are often overburdened and do not have the time to thoroughly review development plans for inclusion of stormwater / urban runoff controls. To assist them in reducing water quality impacts, workshops and trainings should be conducted with the developers and project designers to raise their awareness of stormwater / urban runoff controls that can be included at the onset of the project, rather than relying solely on planners.

Status: Phase 1

Potential Partners: CCC, cities and counties, RWQCBs

Strategy WQPP-3: Regional Urban Runoff Management

The objective of this strategy in the original plan was to initiate a collaborative effort among municipal, county, and RWQCB staff to develop and implement area-wide urban runoff management programs.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Develop a Model Municipal Program, Which Provides a Comprehensive Guide to Urban Runoff Management	Completed
Evaluate Existing Regional Urban Runoff Programs for Lessons Learned	Completed
Modify Stormwater Task Force Goals	Not Initiated
Select a Pilot Area For an Urban Runoff Program	Complete
Develop a Formal Program Structure For Regional Effort	Partial Implementation
Develop a Plan For Area-Wide Program	Partial Implementation
Implement the Pilot Program	Completed
Modify Program and Implement in Other Areas	Partial Implementation

Initial implementation of this strategy involved the development of a Model Urban Runoff Program (MURP), in collaboration with the cities of Monterey and Santa Cruz, the Sanctuary, CCC and the RWQCB. The MURP is a comprehensive guidebook that includes model ordinance revisions, municipal best management practices, illicit discharge detection programs, and recommendations for organizing, funding and monitoring the program. In addition to development of the guidebook, initial implementation of MURP was accomplished in Monterey, Santa Cruz and the City of Watsonville via grant funding. The guidebook has been distributed to all local jurisdictions and numerous trainings have been conducted. Several additional cities have begun adopting the recommendations.

A second key element of this strategy, the development of a formal regional approach to urban runoff, has been partly initiated by local jurisdictions. In Monterey County, Monterey Regional Water Pollution Control Agency is serving as a regional coordinator and permit holder for a coalition of municipalities on the Monterey Peninsula to address urban runoff under NPDES Phase II regulations. A regional approach is also being considered in Santa Cruz County but has not yet been formalized.

Strategy Description

The strategies contained in the MURP are directly transferable to jurisdictions developing their stormwater management programs required under their new Phase II permits. Given the fiscal situation of many jurisdictions there will be a need to reduce development costs and to utilize existing programs and materials. In addition, there is an ongoing need to encourage coordination among jurisdictions to develop regional programs in additional areas.

Activity 3.1: Coordinate with Individual Jurisdictions to Implement Local Stormwater Programs

The Sanctuary should coordinate with individual local jurisdictions in the development and implementation of their stormwater management programs to provide materials

developed under the MURP, and assist in implementation of the technical training, monitoring and educational elements of addressing urban runoff management.

Activity 3.2: Facilitate the Development of Regional Stormwater Programs

The Sanctuary should coordinate with additional jurisdictions to encourage their development of coordinated regional approaches to stormwater and pooling of their resources to address urban runoff issues. This should include encouraging the development of multijurisdictional NPDES permit programs such as those developed for the Monterey Peninsula. The Sanctuary should also continue to collaborate with the Stormwater Task Force as a platform for information sharing and coordination of Phase II NPDES programs around Monterey Bay, and with other entities such as MRWPCA in their regional stormwater programs.

Status: Phase 1

Potential Partners: cities and counties, MRWPCA, RWQCBs, CCC

Strategy WQPP-4: Structural/Non-structural Controls

The objective of this strategy in the original plan was to develop demonstration projects and conduct briefings with municipalities, counties and special districts to promote the use of Best Management Practices (BMPs). Additional activities sought to initiate regional cooperation for prioritizing sites and adopting such practices.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Select Pilot Project/Solicit Participation	Completed
Plan, Implement, and Evaluate Pilot Project	Completed
Develop/Distribute BMB Guidelines	Not Initiated
Expand Implementation	Not Initiated

Direct Sanctuary involvement in implementation of this strategy has been limited to a pilot project and study conducted jointly with the City of Monterey to test the utility of oil and sediment/water separators for treating runoff from parking lots, which uncovered numerous technical challenges in the use of such devices. Identification of alternative types and locations for demonstration projects, and briefings to local government have not been conducted. However, the CCC has initiated numerous structural control projects through its permits.

Strategy Description

The use of Best Management Practices should be promoted including structural and nonstructural controls to improve water quality.

Activity 4.1: Promote structural and nonstructural controls via technical training

Status: Phase 1

Activity 4.2: Track and comment on major local projects and plans to encourage inclusion of structural and nonstructural controls

Status: Ongoing

Activity 4.3: Pursue additional pilot projects with local jurisdictions

Status: Phase 2

Potential Partners: cities and counties, CCC, developers

Strategy WQPP-5: Sedimentation/Erosion Controls

The objective of this strategy in the original plan was to initiate a collaborative effort among cities, counties, special districts, and state agencies to develop and implement an erosion / sedimentation source control program for non-agricultural areas, including urban, suburban, and rural residential developments. The strategy sought to identify and evaluate erosion control measures and standards for effectiveness and consistency across counties and municipalities, develop proposed language revisions for “model” ordinances and programs, and implement programs in pilot areas.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Identify Measure and Standards	Partial Implementation
Develop Model Programs/Schedule Revisions	Not Initiated
Identify Pilot Area/Conduct Briefings	Not Initiated
Implement in Pilot Area/Evaluate Success	Not Initiated
Implement in Remaining Non-Agricultural Areas	Not Initiated

CCC compiled an initial listing of standards found in existing ordinances from a number of counties and cities in the Sanctuary region, outlining minimal grading amounts that trigger permits, areas and types of grading where seasonal restrictions may apply, erosion control plan criteria, etc. The WQPP committee has not yet reviewed this data or developed related recommendations on standardization of ordinances or development of model programs and pilot projects.

Strategy Description

A regional evaluation of erosion control standards should be conducted to identify and address gaps and inconsistencies.

Activity 5.1: Evaluate erosion control measures and standards in county and city ordinances

Activity 5.2: Develop recommendations for revisions and work with local jurisdictions to implement

Status: Phase 2

Potential Partners: CCC, WQPP committee, cities and counties

Strategy WQPP-6: Storm Drain Inspection

The objective of this strategy in the original plan was to work with public works departments to develop a monitoring, mapping and management system in coastal cities for critical storm drains and outfalls with a history of contaminated flows or which drain to critical habitat.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Prepare Monitoring System in Two Priority Cities	Substantial Implementation
Implement System in Two Priority Cities	Substantial Implementation
Conduct Training in Coastal Cities	Partial Implementation
Conduct Evaluation	Not Initiated
Implement Additional Systems	Partial Implementation

Monitoring of the storm drain system has been initiated in several cities via the Urban Watch Program and the First Flush programs coordinated by the Sanctuary Citizen Watershed Monitoring Network. These programs are collaborative efforts between the Sanctuary, the cities, Coastal Watershed Council, and trained volunteers to take samples at selected locations monthly during the dry season and during the first large rain event of the year. These volunteer programs have been operating in Monterey, Pacific Grove, Capitola and Santa Cruz, and have successfully identified numerous sub-watersheds with high levels of coliform, metals or detergent contamination. Mapping and evaluation of the storm drain system was conducted under MURP grants with the cities of Monterey, Santa Cruz and Watsonville. Training on storm drain mapping and diagnostics, monitoring, and illicit discharge detection has been included in the MURP guidebook and in the regional urban runoff trainings.

Strategy Description

Efforts to monitor, map, diagnose and manage storm drains should be continued and expanded in partnership with local jurisdictions.

Activity 6.1: Continue and Expand First Flush and Urban Watch Monitoring Programs

Monitoring efforts for storm drain contaminants should continue and be expanded to additional jurisdictions through the Sanctuary Citizen Watershed Monitoring Network's First Flush and Urban Watch programs. This should be coordinated closely with local jurisdictions to select appropriate sampling sites.

Status: Phase 1

Activity 6.2: Conduct Follow-up with Public Works Departments

The Sanctuary should follow up with the city public works departments to evaluate the contaminant hot spots identified by these monitoring programs and encourage them to conduct follow up assessments or targeted source control efforts.

Status: Phase 1

Activity 6.3: Expand Mapping, Diagnostic Capabilities and Illicit Discharge Programs

MBNMS should coordinate with local jurisdictions to promote expansion of their mapping and diagnostic capabilities and illicit discharge detection efforts, as part of their Phase 2 programs. Mapping, illicit detection, and monitoring should also be addressed in new technical training sessions.

Status: Phase 2

Potential Partners: volunteer monitoring groups, CCC, WQPP committee, cities and counties

Strategy WQPP-7: CEQA Additions

The objective of this strategy in the original plan was to provide local planners and elected officials with additional analytical tools to assess and reduce the potential changes in the quantity and quality of urban runoff resulting from proposed new development. This tool was to involve the incorporation and use of several questions related to urban runoff in the California Environmental Quality Assessment checklist which local planning departments use to evaluate impacts and target appropriate mitigation recommendations. The checklist was to be accompanied by a training module which would highlight how to conduct the assessment and outline potential best management practices which could be recommended to reduce water quality impacts.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Produce and Distribute Training Packet for Local Planners to Accompany Checklist	Completed, Needs Update
Complete Pilot Project of CEQA Checklist Revisions in Monterey County	Completed
Identify and Initiate Project in Remaining Jurisdictions	Partial Implementation
Adoption of CEQA Changes	Partial Implementation
Evaluate Effectiveness of Changes	Not Initiated

A revised CEQA checklist was developed in collaboration with Monterey County Planning Department, along with a guidebook to assist in training local planners to more thoroughly consider water quality issues related to new developments. The revised CEQA checklist was distributed to all the cities and counties in the Sanctuary region. The checklist was adopted by Monterey County and Santa Cruz County, and it is unknown what, if any, cities also adopted it.

Strategy Description

There is an ongoing need to work with additional local jurisdictions to revise their checklists and provide accompanying training guidelines on practices which could be included in new redevelopment projects.

Activity 7.1: Encourage the adoption of the CEQA checklist revisions in additional jurisdictions

This should include an assessment of which jurisdictions still have not adopted the CEQA checklist (likely to be most cities), and redistributions and outreach to those jurisdictions to encourage its adoption.

Status: Phase 1

Activity 7.2: Provide accompanying training materials and workshops

The CEQA additions training manual should be updated to incorporate new BMPs and distributed with the checklist. Regional training workshops should be conducted for planners to familiarize them in more detail with the issue. These trainings should include on-the-ground demonstrations to gain an understanding that may be lacking when plan-checking in the office. BMPs are often very simple, both structurally and functionally, and with an improved understanding of them planners can ensure that they are included in new or redevelopment projects.

Status: Phase 1

Activity 7.3: Conduct follow up evaluations

Follow-ups should be conducted with planning department management to ensure that the checklist revisions are incorporated into their review process. Evaluations should also include an assessment of whether the revisions are leading to the inclusion of additional BMPs in projects.

Status: Phase 2

Potential Partners: Counties, cities, CCC

ACTION PLAN II: REGIONAL MONITORING, DATA ACCESS, AND INTERAGENCY COORDINATION

The second WQPP plan developed in 1996 addresses the need for a continuous and coordinated strategy for regional monitoring of water quality and compilation of water quality data on a regional level. It also addresses the need for a continuous regional framework for coordinating ways to address water quality, implement and update the WQPP plans and develop new ones where needed.

Strategy WQPP-8: Regional Monitoring

The objective of this strategy in the original plan was to coordinate and strengthen existing monitoring activities within the Sanctuary and its adjacent watersheds, and to develop a cost-effective, comprehensive approach to providing managers at federal, state, and local agencies and the public the information they need to protect aquatic resources.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Conduct Preliminary Assessment of Monitoring Programs in Sanctuary Region	Completed, Needs Update
Expand Assessment and Conduct Workshop to Develop Initial Recommendations	Completed, Needs Update
Evaluate Other Existing Regional Monitoring Approaches for Lessons Learned	Ongoing
Identify Specific Questions and Parameters To Be Monitored	Completed, Needs Update
Analyze Existing Monitoring Station Locations	Partial Implementation
Produce Regional Monitoring Plan	Completed, Needs Update
Develop Program Infrastructure To Sustain Long-Term Effort	Partial Implementation
Implement Monitoring Program	Substantial Implementation
Review, Interpret, and Communicate Results	Partial Implementation

Significant implementation has been initiated on regional coordination and strengthening of government-collected data and volunteer data, and on the development of a regional monitoring program. As recommended in the plan, the Central Coast Regional Water Quality Control Board has led the formation of a regional monitoring program called the Central Coast Ambient Monitoring Program (CCAMP). CCAMP collects long-term data on a rotational basis in several Sanctuary watersheds as well as monitoring of critical river mouths. It has also coordinated a regional monitoring effort (CCLEAN) with the sewage treatment plants within the Sanctuary to develop ambient water quality data in addition to effluent monitoring. The variable nature of state funding and budget cuts has unfortunately led to monitoring program reductions in some of these programs.

For volunteer monitoring, the Sanctuary Citizen Watershed Monitoring Network has been established to coordinate approximately 20 volunteer monitoring groups in the Sanctuary watersheds. The Network provides standardized training and equipment, a regional website, guidance on data entry, media publicity to inform the public, and coordination and outreach to resource managers on monitoring results. It is also

implementing a certification program that can be used to rank the quality of data collected by volunteers. The program also coordinates and sponsors several regional monitoring programs, including an Urban Watch program focused on dry weather storm drain sampling, a First Flush program focused on sampling of the first heavy rain of the season, and a Sanctuary-wide Snapshot Day event which samples urban and rural water quality on Earth Day each year. These volunteer monitoring efforts are a partnership between the Sanctuary Foundation, Coastal Watershed Council, the RWQCB, CCC, local cities, and volunteers.

Strategy Description

Although considerable progress has been made on development and implementation for both government and volunteer monitoring programs, much work remains to continue and improve the efforts.

Activity 8.1: Develop a core set of data for long-term assessments

A core set of data sufficient for long-term assessment and trend analysis should be identified which can be continuous over many years, and monitoring programs to collect these data should be continued or initiated. This core set of data would be the focus during budget cutbacks.

Activity 8.2: Integrate regional monitoring across agencies

The Sanctuary should work with the Central Coast Regional Water Quality Control Board to integrate monitoring efforts with additional programs throughout the Sanctuary, including the San Francisco Bay Regional Water Quality Control Board, county and watershed group programs.

Activity 8.3: Integrate water quality data with SIMoN

Water quality monitoring should be integrated with the SIMoN program, and coordinated with biological monitoring efforts.

Activity 8.4: Develop coordinated long-term interagency funding sources

For both government data and volunteer efforts, coordinated long-term funding sources, possibly shared by a number of agencies, need to be identified, obtained and stabilized to reduce the variability associated with grant work.

Activity 8.5: Enhance training, assistance and certification of volunteer monitoring groups and coordination of annual events

Year-round coordination, training and assistance should be enhanced for existing and new volunteer groups to improve their effectiveness and longevity. MBNMS should also continue coordination of large annual volunteer events such as Urban Watch, First Flush and Snapshot Day.

Activity 8.6: Improve public awareness of monitoring efforts

Additional work is needed to improve public awareness of monitoring efforts, particularly of volunteer groups, including efforts with print, radio and TV media.

Status: Phase 1

Potential Partners: RWQCBS, SWRCB, CWC, Ocean Conservancy, CCC, counties, EPA, research institutions, volunteer groups, environmental organizations

Strategy WQPP- 9: Data Access

This objective of this strategy in the original plan was to develop a digital data access system to link water quality data and related parameters for the Sanctuary's watersheds and ocean areas. This database was to provide environmental scientists and resources managers with the tools to evaluate problems and make environmental management decisions.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Identify Existing Monitoring Data Sets	Completed, Needs Update
Form Interagency Data Task Force	Partial Implementation
Identify Specific Questions To Be Answered by Data	Substantial Implementation
Identify and Evaluate Existing Database Systems and Networks	Substantial Implementation
Identify Relevant Data, Standard Format and Access System Design	Partial Implementation
Develop QA/QC Protocols and MOAs	Partial Implementation
Develop Metadata and Summary Data for Each Program	Partial Implementation
Conduct Annual Performance Review	Partial Implementation

The Sanctuary and EPA conducted an initial summary of data sets available. The RWQCB has developed a regional database and GIS mapping system for CCAMP to display water quality data collected by the RWQCB. The Sanctuary Citizen Watershed Monitoring Network has also been working with the RWQCB to allow display of its data in a volunteer version of the CCAMP system. CCAMP and the Sanctuary Citizen Watershed Monitoring Network have been working to develop QA / QC protocols and work with watershed groups to adopt these procedures. The Central Coast Joint Data Committee administered by AMBAG has also made progress in compiling and sharing GIS information on the region's watersheds including topography, land use, parcels, etc. CCAMP and the Sanctuary Citizens Watershed Monitoring Network have produced annual or event-related summary data reports (e.g. First Flush, Snapshot Day, and Urban Watch). However, additional work remains to be done by these groups and others to facilitate the display and ready access to water quality data and related information from a variety of sources.

Strategy Description

Although significant progress has been made of this strategy, much additional work remains to be conducted to develop a database or series of databases which can integrate information from a number of sources and is packaged in a user-friendly way as a decision-making tool.

Activity 9.1: Establish a database or system that integrates data from various sources

Additional evaluation should be conducted to determine if the CCAMP database can meet Sanctuary needs, and either move to expand this system or develop alternative approaches which can link federal, state, county and university data. The water quality database should also be integrated with or become part of the SIMoN database.

Activity 9.2: Certify data quality for volunteer groups and incorporate into database

The version of the database for volunteer data should be expanded. This will require certification of the data quality of additional watershed groups, including developing QA/QC protocols for their data.

Activity 9.3: Improve packaging and distribution of data to decision-makers and the public

Additional focus needs to be directed to packaging and distributing both government and volunteer data to decision makers in an understandable way, and working with them to conduct follow up to track and reduce sources of contamination. This should include an annual report of water quality trends in the Sanctuary that integrates data from a number of programs.

Status: Phase 1

Potential Partners: RWQCBs, SWRCB, counties, volunteer groups

Strategy WQPP-10: Interagency Coordination

The objective of this strategy in the original plan was to develop a continuous regional framework for coordinating ways to address water quality, implement and update the WQPP plans and develop new ones where needed.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Establish a Management Council for The WQPP	Partial Implementation
Establish Linkages with Other Groups	Substantial Implementation
Coordinate Implementation of WQPP Strategies	Substantial Implementation
Prioritize Funding Goals	Substantial Implementation
Coordinate Permit Review	Partial Implementation
Coordinate Enforcement Activities	Partial Implementation
Evaluate New Problems and Develop New Strategies	Substantial Implementation

The WQPP committee served as a coordinated regional framework during the development of the first four plans and assists in coordinating their implementation. Various subgroups and members of the committee work together with Sanctuary staff to pursue specific implementation projects, pursue funding, etc. A charter for a more formal WQ Council was developed several years ago, but has not been implemented. As part to the JMPR review, the WQPP committee indicated that the basic format of the existing committee meets the needs of the WQPP and can serve to address the major steps in this strategy, and that a more formal Water Quality Council is not necessary. Regarding evaluating new problems and issues, many committee members assisted with the development of the Beach Closures Action Plan, and implementation of this plan will eventually be overseen by the committee.

Strategy Description

The activities under this strategy regarding plan development, funding and implementation, and addressing new problems should be continued and strengthened by the existing committee.

Activity 10.1: Review and update committee membership and structure

Committee membership should be reviewed and potentially expanded to incorporate new issues and activities. Establishment of ongoing subcommittees that oversee implementation of individual plans should also be considered, as this approach has been very effective in implementing the Agriculture and Rural Lands Plan.

Activity 10.2: Continue regular committee meetings and coordination to oversee implementation and address new issues

The committee needs to reestablish a regular quarterly meeting schedule that has been interrupted by a staff vacancy, as well as coordinate between meetings on a regular basis. Committee meetings and other communications should focus on overseeing and enhancing joint implementation of the plans, evaluating progress, and addressing new issues as they arise.

Activity 10.3: Coordinate WQPP funding

The committee's efforts should include coordinating grant applications with partners, working with MOA signatory agencies to highlight WQPP plans in their grant RFPs, and strengthening fundraising efforts through the Sanctuary Foundation.

Activity 10.4: Develop an annual report and workshop on the WQPP

An annual report and workshop on the WQPP and its activities should be developed that summarizes progress on implementation, and assesses next steps, identifies partnerships and water quality trends. This should include contributions from the many partners in the program.

Status: Phase 1

Potential Partners: WQPP Committee, MOA signatories

ACTION PLAN III: MARINAS AND BOATING

This action plan developed in 1997 describes strategies designed to reduce water pollution from certain activities associated with marinas and boating within the Sanctuary. Boater-generated impacts on water quality generally fall into four categories: toxic metals primarily from anti-fouling paints, hydrocarbons from motor operation and maintenance procedures, solid waste and marine debris from overboard disposal, and bacteria and nutrients from boat sewage. This plan took the approach that much of this pollution can be reduced through education and training programs, application of new technologies and on-site facilities.

Strategy WQPP-11: Public Education and Outreach

The objective of this strategy in the original plan was to expand and build upon existing efforts conducted by individual harbors to develop a coordinated regional education and outreach program. These programs sought to communicate to boaters the environmental, recreational and economic impacts of pollution.

The recommendations listed under the following activities generally consist of similar actions that can be generalized as:

- Compiling existing materials for each topic;
- Defining programs and target audiences;
- Preparing materials and developing distribution networks and programs; and,
- Contacting the targeted audiences with the materials / implementing programs.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Review Existing Materials, Define Audience / Topics	Completed
Bilge Wastes and Waste Oil Education	Substantial
Product Information/Toxics Disposal Education	Partial Implementation
Marine Debris Education	Partial Implementation
Vessel Fueling Education	Not Initiated
Sewage Discharge Education	Partial Implementation
Underwater Hull Cleaning Education	Not Initiated
Education on Existing Laws	Substantial Implementation
Develop an Ongoing Distribution Program	Partial Implementation
Encourage Community Use/Stewardship of Harbor	Not Initiated

There are several active partners that have been developing and distributing informational and educational products for over 5 years, including Save Our Shores' Clean Boating Network and the California Coastal Commission's Boating Clean and Green Program. Grant funded educational efforts developed by the Sanctuary and/or SOS include a harbor water quality poster, water quality signage put in place at all the harbors, signage at bilge pumpout facilities, a bilge pumpout brochure. SOS also has developed a Dockwalker program that conducts one-on-one outreach and distributes educational materials to boaters at the harbors. Education and promotional activities have also accompanied the installation of new bilge pumpout facilities at all of the harbors.

Strategy Description

This strategy will build upon and expand existing materials and programs and make outreach a regular occurrence.

Activity 11.1: Sustain and Develop One-on-one Boater Outreach Programs

The WQPP should work with various organizations to sustain and develop one-on-one programs with boaters such as Dockwalkers, including recruitment of volunteers and obtaining funding. This should include efforts to distribute materials and discuss with boaters the above list of water quality issues, with special emphasis on use of the bilge water and sewage disposal stations, and on hull cleaning practices that can affect both water quality and exotic species problems.

Status: Phase 1

Potential Partners: SOS, CCC, harbormasters

Strategy WQPP-12: Technical Training

The objective of this strategy in the original plan was to develop and implement a regional technical training program for harbor, marina, and boatyard employees within the Sanctuary.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Identify Subject Areas	Completed
Compile Training Materials	Completed
Identify Instructors, Trainers, and Funding	Partial Implementation
Solicit Participation and Develop Incentives	Partial Implementation
Conduct Regional and On-Site Workshops	Partial Implementation
Evaluate Workshops and Modify as Needed	Not Initiated

General water quality training modules were compiled for the harbors, and the package was introduced to several of the harbors as part of their training for the bilge water pumpout facility. Ongoing regional training has not been addressed, except for any staff training efforts already underway by harbormasters.

Strategy Description

A review of technical training needs and opportunities should be conducted and programs developed to address gaps.

Activity 12.1: Update Training Materials as Necessary

Activity 12.2: Identify and Pursue Opportunities to Conduct On-site Trainings

Status: Phase 3

Potential Partners: Harbormasters, SOS

Strategy WQPP-13: Bilge Waste Disposal and Waste Oil Recovery

The objective of this strategy was to facilitate the collection of contaminated bilge water through the construction and operation of new bilge water pumpout and waste handling facilities.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Initiate Public Education Program	Substantial Implementation
Provide Absorbent Pads	Substantial Implementation
Identify Permits and MOAs	Completed
Identify Funding Sources	Completed
Identify Technology	Completed
Identify Appropriate Sites	Completed
Construct Pumpouts	Substantial Implementation
Publicize Location/Increase Enforcement	Partial Implementation

In 1999, the Sanctuary in collaboration with Ecology Action and Save Our Shores received a grant from the California Integrated Waste Management Board (CIWMB) to install bilge and crankcase oil pumpouts at Monterey and Moss Landing harbors, and to distribute absorbent pads. A system was later installed by SOS in Santa Cruz harbor in 2002 through a similar grant. These systems, with a significant amount of education and promotion, have been very successful, leading to the recycling of over 8,000 gallons of oil in Monterey and Moss Landing harbors. The systems however, have proved to be expensive to operate and maintain for the harbors. In addition, the preexisting pumpout station at Pillar Point harbor has aged significantly and is now of insufficient capacity and needs to be replaced.

Strategy Description

The bilge pumpout system equipment and procedures should be updated as needed, and the use of the facilities promoted.

Activity 13.1: Develop Incentives and Promotions to Encourage Facility Use

Incentives should be developed to encourage boaters to use the pumpouts, along with an ongoing outreach program to promote the facilities.

Activity 13.2: Increase the Economic Viability of the Systems

Measures should be developed that will make the region's systems more economical to maintain, including revisiting the idea of sending the cleaned effluent to the sewer treatment plant or using a low-threat discharge permit.

Activity 13.3: Upgrade the Bilge Pumpout Facility at Pillar Point

The WQPP should work with the harbor to obtain funding for a new system, as well as assist with coordinating an appropriate disposal method.

Strategy WQPP-14: Hazardous and Toxics Material Management

The objective of this strategy was to initiate a program to provide periodic collection events at harbor districts in the Sanctuary. Additionally, it sought to resolve potential regulatory and liability issues that currently impede harbor districts taking a more active role in hazardous materials management, and to work with regional and county waste management agencies to incorporate harbor waste collection initiatives into existing

programs. It identified the need to develop convenient disposal options for boaters that allow for the drop-off and collection of hazardous materials in harbors and to establish procedures for the collection of batteries, paints, solvents, antifreeze, and waste oil / fuels at periodic collection events.

Implementation of WQPP Steps to Date

Steps	Implementation Status
Plan Periodic Waste Collection and Pickup Events	Not Initiated
Obtain Funding	Not Initiated
Develop Sites	Not Initiated
Establish Procedures Handling Materials	Not Initiated
Implement Periodic Collection and Pickup Events	Not Initiated
Implement Education Program	Partial Implementation

No specific targeted work has been conducted on this strategy, although hazardous material handling was addressed in the outreach materials distributed to boaters under the education strategy.

Strategy Description

In following up with several harbor masters on this strategy as part of the JMPR process, they indicated that hazardous materials were now being handled adequately and that they periodically haul them off to designated disposal sites. A more thorough review at each harbor should be completed in future years, and proper handling of these materials promoted to boaters.

Activity 14.1: Evaluate the Process for Storing, Handling and Disposing of Materials

Conduct a more thorough evaluation of the process used at each harbor to identify and address gaps in the system, if any.

Activity 14.2: Incorporate Hazardous Material Training into Education and Outreach to Boaters

Status: Phase 3

Potential Partners: Harbor masters, SOS

Strategy WQPP-15: Topside and Haul-out Vessel Maintenance

The objective of this strategy in the original plan was to identify and promote regional guidelines on practices that reduce contaminants from hull wash-water and first flush runoff from boatyards and parking lots. Additionally it sought to promote continued and expanded use of dust and drip containment methods and paint stripping technologies and products that result in reduced emissions. It recognized the need to review the effectiveness of policies and pollution controls addressing maintenance work at boat slips, parking lots, and unregulated work areas and to promote boat maintenance methods that generate less pollution through education efforts and/or “Clean Worker Contract” programs.

Implementation of WQPP Steps to Date

Steps	Implementation Status
Promote New Stripping/Refinishing Technologies	Not Initiated
Improve Containment and Filtering of Paint	Not Initiated
Ensure Compliance with Existing Regulations	Not Initiated
Improve Control and Filtering of Runoff	Not Initiated
Review Policies Regarding Work in Slips/Parking Lots	Not Initiated

No specific targeted work was conducted by the Sanctuary on this strategy, although various harbors and boatyards may have been addressing parts of the strategy.

Strategy Description

Contaminants from hull-washwater and runoff from boatyards and parking lots should be addressed by improved management practices.

Activity 15.1: Promote New Stripping and Refinishing Technologies

Activity 15.2: Improve Containment and Filtering of Paint

Activity 15.3: Ensure Compliance with Existing Regulations

Activity 15.4: Improve Control and Filtering of Runoff

Activity 15.5: Review Policies Regarding Work in Slips/Parking Lots

Status: Phase 2

Potential Partners: Harbormasters, boatyards, SOS, RWQCB

Strategy WQPP-16: Underwater Hull Maintenance

This strategy in the original plan sought to initiate a program targeted at boat hull maintenance that promotes less toxic paints and improved under-water cleaning practices to reduce discharges to harbor waters. This would be accomplished by distributing information on less toxic paints and results of demonstration projects that evaluate new materials and maintenance methods that reduce discharges. The need to consolidate and promote guidelines for bottom paint preparation and to reduce excessive sloughing of paint was also identified. This strategy sought to initiate a training and certification program for divers who conduct under water cleaning to reduce discharges from hull cleaning practices.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Promote Safe Marine Products	Partially Implementation
Promote Results of Demonstration Events	Not Initiated
Improve Bottom Paint Preparation	Not Initiated
Initiate Hull Training and Cleaning Certification	Not Initiated

No specific regional work has been conducted on this strategy, although the California Clean Boating Network is considering the issue, and safe products lists have been included in education materials.

Strategy Description

Improvements in underwater hull maintenance should be implemented due to the potential to discharge numerous toxic chemicals into harbors and due to the growing concern regarding introduction of exotic species into harbors and coastal areas. Boaters and harbormasters need to be updated on newly developed improved methods and need to have resources available to disseminate to interested boaters. Guidelines should include recommendations on preventing the spread of exotic species in addition to reducing water quality contamination.

Activity 16.1: Promote Safe Marine Products and Procedures for Antifouling Use

Safe products for use as hull paints should be identified and promoted via outreach and demonstration events. Proper techniques for bottom paint preparation to reduce sloughing should also be included in the guidelines and demonstrations.

Activity 16.2: Initiate Guidelines and Trainings for Hull Cleaning

Develop guidelines and training for divers who conduct underwater hull cleanings, including recommendations to reduce water quality contaminations and spread of exotic species. Consider development of a certification program for cleaners who use proper techniques.

Status: Phase 1

Potential Partners: Harbormasters, paint supply companies, boating organizations, California Clean Boating Network

Strategy WQPP-17: Harbor Pollution Reduction Progress Review

The objective of this strategy was to develop simple procedures and checklists for harbor masters to assess the current status of their pollution control efforts, and to track annual progress towards pollution reduction.

Implementation of WQPP Steps to Date

<i>Steps</i>	<i>Implementation Status</i>
Develop Report Format and Checklist	Not Initiated
Develop Tracking System	Not Initiated
Annual Review and Recommendations	Not Initiated
Develop “Clean Harbor” Recognition Program	Not Initiated

No specific targeted work on this strategy, and the WQPP committee recommended no further action on this strategy at this time.

Status: Phase 3

Potential Partners: harbor masters, environmental organizations, RWQCB

ACTION PLAN IV: AGRICULTURE AND RURAL LANDS

The Agriculture and Rural Lands Plan was developed in 1999 to address agricultural runoff in the form of sediments, nutrients and persistent pesticides. The original plan outlines six sections containing twenty-four strategies and ninety activities intended to protect and enhance the quality of water that drains into the Sanctuary while sustaining the economic viability of agriculture. To more briefly summarize these recommendations for inclusion in the JMPR, each of the 6 chapters or sections of the original plan is here termed a strategy and each of the original 24 strategies is here termed an activity, allowing for the omission of some of the detailed steps that can be referred to in the original plan. The strategies include organizing agricultural industry networks and watershed groups, increasing technical assistance and education, funding and economic incentives for conservation measures, permit coordination for conservation practices, and improving maintenance practices for rural roadways and public lands.

The many partners that are working together throughout the six-county area on implementation of the Agriculture and Rural Lands Plan are known as the Agriculture Water Quality Alliance (AWQA). AWQA includes agriculture industry groups, federal, state, and local agencies, technical experts, environmental organizations and university researchers. The AWQA Steering Committee, directing the effort, has representatives from the Sanctuary, Coalition of Central Coast County Farm Bureaus, Natural Resources Conservation Services, Resource Conservation Districts, and University of California, Cooperative Extension.

Because the Agriculture and Rural Lands Plan is relatively new, there has been less time for implementation to proceed and the original recommendations are still relevant. Therefore, we are using a slightly different format to identify future activities for this portion of the WQPP plan, as all current strategies and activities in the original plan will be maintained as future activities in this JMPR action plan. Also, as this is a much longer plan in terms of number of original strategies and activities, both the recommendations and the implementation to date are summarized only at a broad level.

Strategy WQPP-18: Establish Agricultural Industry Networks to Address Water Quality

Strategy Description

The three activities in this strategy establish a process for developing industry-led networks of landowners and operators to address agricultural nonpoint pollution issues. Watershed-level agricultural working groups will be established in the Sanctuary's watersheds, under the leadership of existing large agricultural organizations such as Farm Bureaus and related industry groups. These industry networks will take the lead in organizing and working with their own members to establish joint projects for nonpoint source management in priority watershed areas. Activities in this section also include identifying priority target regions for joint projects, conducting outreach on nonpoint issues, assisting growers and ranchers in developing and carrying out voluntary site-specific management plans, obtaining outside technical assistance as needed, and tracking implementation success over time.

Activity 18.1: Establish Regional Industry Networks as a Framework for Addressing Nonpoint Source Management

Status: This activity is underway and includes ongoing implementation.

Activity 18.2: Identify Priority Sites for Landowner Joint Projects

Status: This activity has been substantially implemented.

Activity 18.3: Implement Nonpoint Source Management Practices Using Industry-Led Watershed Groups

Status: This activity has been partially implemented.

Implementation to date

The Coalition of Central Coast County Farm Bureaus formed in 2000 to oversee the agricultural industry's regional implementation of this plan, and continues to meet quarterly. Ten Agricultural Watershed Working Groups have been organized by the Coalition since then. Over 150 farmers and ranchers participate in these groups by developing Water Quality Plans for their properties and installing conservation practices that reduce erosion and nutrient runoff. Water quality plans have been developed for 97,200 acres of crop and rangeland, and applied on 77,500 acres of crop and rangeland. A diversity of crops are represented in Agricultural Watershed Groups: cattle, vegetables, vineyards, orchards, field and greenhouse flowers, strawberries, pumpkins, etc. Many additional groups are in the process of being formalized. Additional work is needed to ensure that growers who are not part of existing large organizations are also reached. A Technical Advisory Committee has established a template for annual tracking of on the ground implementation of practices, and has initiated water quality monitoring surrounding a pilot subwatershed.

Status: Phase 1

Potential Partners: Farm Bureau Coalition, AWQA committee

Strategy WQPP-19: Strengthen Technical Information and Outreach to Agriculture

Strategy Description

Although extensive technical information exists on agricultural techniques and tools to improve water quality, this information is not always readily available/easily usable for growers and ranchers. This strategy contains 7 activities developed to make this information more accessible and useful through increased support for existing technical outreach services, development of networks, cross-training of outreach staff, packaging of easily understood information, and conducting on-site follow-up with workshop participants.

Activity 19.1: Compile, Develop and Distribute User-Friendly Technical Information on Agricultural Conservation Practices

Status: This activity has been partially implemented.

Activity 19.2: Strengthen Referral Network and Cross-Training in Sediments, Nitrates And Pesticides For Technical Field Staff

Status: This activity has been partially implemented.

Activity 19.3: Increase Agency Staff Time to Provide Technical Field Support and Prevention Efforts

Status: This activity has been partially implemented.

Activity 19.4: Strengthen Information Transfer From Industry to Agencies to Keep Up-To-Date On Technical Advances in Conservation Measures

Status: This activity has been partially implemented.

Activity 19.5: Strengthen Grower/Rancher Peer Advisory Networks to Share Conservation Information Among Peers, Including Outreach to Both Landowners And Tenants

Status: This activity has been partially implemented.

Activity 19.6: Evaluate And Distribute Information on Cost-Effectiveness of Water Quality Management Practices

Status: This activity has been partially implemented.

Activity 19.7. Develop And Promote Self-Monitoring Tools for Conservation Management Practices to Assess Problems And Track Success

Status: This activity has been partially implemented.

Implementation to Date

Using a congressional allocation to USDA to implement the Sanctuary's agricultural plan, several technical field staff have been hired by the agricultural agencies to assist farmers and ranchers in the six-county area, including an Agronomist, Water Quality

Monitoring Specialist, Rural Roads Engineer, Rangeland Specialist, Irrigated Agriculture Specialist, Hydrologist, and an Outreach Coordinator.

Over 300 farmers and ranchers have attended a University of California Cooperative Extension training course designed to help farmers develop individual water quality protection plans for their properties. Numerous workshops have been held to train farmers in the benefits and use of specific conservation practices such as cover crops, stream bank protection, irrigation evaluation, and crop row alignment. Training on monitoring practices has also been conducted for the Farm Bureau coordinators.

Research has been completed on the cost effectiveness of 15 common conservation practices used in the six-county region. This information will be a useful tool for landowners to understand the financial costs and benefits of each practice.

Status: Phase 1

Potential Partners: AWQA, RCD

Strategy WQPP-20: Improve Education and Public Relations on Watersheds and Agricultural Conservation Measures

Strategy Description

There is a need for improved education of the general public about agricultural conservation issues, and of agricultural groups and the public about watershed issues as a whole. The 3 activities in this section were developed to enhance public, grower, government agency, and media knowledge about watershed issues, and develop better recognition of the conservation practices that the agricultural community employs.

Activity 20.1: Increase Public Knowledge of and Support for Agriculture and Agricultural Conservation Measures through Media and Outreach

Status: This activity has been partially implemented.

Activity 20.2: Increase Grower and Public Awareness of Watershed-Based Management by Incorporating Watershed Message into Existing Programs and Conducting Media and Outreach

Status: This activity has been partially implemented

Activity 20.3: Increase Agency Staff Understanding of Agriculture Through Development of Bulletins and Conducting Tours

Status: This activity has been partially implemented.

Implementation to Date

Two major press events have been held to highlight AWQA activities and promote conservation practices. A public relations firm was contracted to help develop a media kit explaining watershed management and agricultural conservation practices that protect water quality. A freelance journalist has been contracted to develop stories on conservation practices for both general media and industry trade journals. Resource agency staff have attended many of the agricultural workshops and field days hosted by AWQA partners. The UCCE Farm Water Quality Short Course, taken by all members of Watershed Working Groups, includes an overview presentation on watershed definition and function. An AWQA Web site is currently under construction, designed to educate both the public and the agriculture industry about watershed management and agricultural conservation practices. Additional outreach models need to be developed to inform farmers and ranchers who are not involved in Farm Bureau, or who do not speak English as a primary language.

Status: Phase 1

Potential Partners: AWQA

Strategy WQPP 21: Coordinate and Streamline Regulations for Conservation Projects

Strategy Description

This strategy stems from comments from both agency staff and landowners on the difficulty of the existing permitting process for conservation practices due to multiple agencies having jurisdiction over projects. A grower or rancher may need multiple permits from each of several agencies at the local, state, and federal levels, with separate fees, different requirements, different timelines, and sometimes contradictory mandates, even for projects which have a beneficial impact on water quality such as sediment basins, vegetative buffers, etc. The 3 activities in this section were developed to simplify and coordinate the existing permitting process for practices which protect water quality, more effectively apply existing regulations, and strengthen collaborative efforts between the regulatory agencies and the landowners.

Activity 21.1: Develop User-Friendly Permit Guidebooks and Central Locations for Permit Information for Growers Initiating Conservation Projects

Status: Phase 2, This activity has been partially implemented.

Activity 21.2: Develop Regional or Watershed-Based Permits for Conservation Management Practices Which Cover the Projects of Multiple Growers Which Adhere to Defined Agency Conditions

Status: Phase 1, This activity has been substantially implemented.

Activity 21.3: Improve Collaborative Efforts Between Regulatory Enforcement Agencies and Landowners to Improve Water Quality Practices

Status: Phase 2, This activity has not been implemented.

Implementation to Date

A watershed level permit for water quality improvements has been developed for the Salinas Valley, modeled after the successful Elkhorn Slough permit coordination program. Under a watershed permit, conservation practices are pre-approved by the agencies, and growers can work directly with the Natural Resources Conservation Service to design and install the conservation practice. This is expected to lead to an increased number of on-the-ground projects that protect water quality. A promotional brochure on the permit streamlining program for the Salinas Valley has been developed and distributed. Work has begun to develop a similar streamlining program in Santa Cruz County.

Potential Partners: NRCS, RCD, AWQA Committee

Strategy WQPP-22: Improve Funding Mechanisms and Incentives for Water Quality Improvements

Strategy Description

Growers and ranchers are sometimes discouraged from installing conservation practices due to the initial costs for construction and then ongoing maintenance. The 5 activities in this section include ways to assist landowners and tenants in developing funding and economic incentives for agricultural conservation measures, and to promote their long-term economic benefits. Also included are strategies to inform growers and ranchers about tax policies that provide tax relief for implementing conservation measures, and to develop new policies that can serve as an additional incentive for voluntarily adopting such measures.

Activity 22.1: Improve Agricultural Community's Knowledge of and Access to Funding Sources Through Compiling and Distributing Funding Information and Promoting Assistance with Applications

Status: This activity has been partially implemented.

Activity 22.2: Facilitate Availability of Trained Assistance for Conservation Field Projects Through Utilizing Low Cost Labor Sources such as Americorps, Volunteers And Interns

Status: This activity has not been initiated.

Activity 22.3: Broaden Applicability of Cost-Share Programs for Conservation Measures and Streamline Application Process to Encourage Use by Both Tenants and Landowners

Status: This activity has not been initiated.

Activity 22.4: Increase Understanding of Existing Tax Benefits for Installing Water Quality Conservation Measures Through Development and Distribution of a Guide

Status: This activity has not been initiated.

Activity 22.5: Improve Tax Incentives for Implementing Conservation Measures

Status: This activity has not been initiated.

Implementation to Date

The Farm Bureaus have obtained funding to assist their watershed working groups from State grants and private funding sources. NRCS has also substantially increased its funding under the EQIP cost-share program to growers installing conservation projects in several key Sanctuary watersheds. Additional funding sources are available under the new Farm Bill. However many of the specific recommendations in this section regarding improving funding for conservation measures have not been initiated.

Status: Phase 2

Potential Partners: NRCS, AWQA Committee

Strategy WQPP-23: Improve Water Quality Management on Public Lands and Rural Roads

Strategy Description

This section addresses management issues for public and private rural lands that may include activities other than farming and ranching. Roadways in rural areas can generate significant erosion and sedimentation problems if not properly maintained. The intent of the 3 strategies in this section is to improve both public and private planning and maintenance practices for rural roadways, in order to reduce erosion and properly dispose of sediment. In addition, this section includes a strategy to address the management and maintenance related to erosion on public trust lands, which is often deficient due to a lack of foresight and funding for long-term maintenance/improvement needs.

Activity 23.1: Provide for Maintenance Practices to Address Sedimentation on Public Roads and Waterways through Guidelines and Trainings for Public Works Staffs

This activity has been partially implemented.

Status: Phase 1

Activity 23.2: Reduce Sedimentation from Rural Unsurfaced Roads and From Surfaced Roads that are Not Maintained Through Mapping, Technical Outreach to Landowners on Maintenance or Decommissioning, and Modifications During Transfer of Ownership

This activity has been partially implemented.

Status: Phase 1

Activity 24.2: Improve Conservation Measures on Agency/Public Trust Lands

This activity has not been initiated.

Status: Phase 2

Implementation to Date

Training workshops for Public Works staff have been presented in Santa Cruz and San Mateo Counties. Guidelines for road maintenance practices that can prevent sedimentation and erosion are being finalized in Santa Cruz County and will be distributed to other counties for adoption of similar practice standardization. The recently hired Rural Roads Engineer (NRCS) has undergone training to begin his advisory role in the six-county area. However, this section of the plan has not yet received a strong focus due to attention paid to the agricultural sections of the plan in early years.

Potential Partners: Counties, RCDs, AWQA, NRCS, land trusts, BLM, USFS, CCC, state and local park districts